

Description a new species of the Genus *Gonoclostera* Butler, 1877 (Lepidoptera, Notodontidae) from Yunnan, China

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Abstract: A species of the genus *Gonoclostera* Butler, 1877, *G. fangi* sp. nov., from Yunnan, China is described in the present paper. Generic diagnosis and list of world species, as well as the photos of adults and genitalia of the new species are also provided.

Key words: Yunnan; New species; *Gonoclostera*; Pygaerinae; China

Introduction

The genus *Gonoclostera* Butler, 1877 (Butler 1877) is a small genus, only comprises four described species: *G. aurosigna* (Hampson, 1895), *G. timoniorum* (Bremer, 1861), *G. denticulate* (Oberthür, 1911) and *G. argentata* Oberthür, 1914 to date (Holloway 1983; Schintlmeister & Pinratana 2007; Wu & Fang 2003), mainly distributed in Southeast Asia region. In China, until now a total of 3 species of the genus *Gonoclostera* (*G. timoniorum* (Bremer, 1861), *G. denticulate* (Oberthür, 1911) and *G. argentata* (Oberthür, 1914)) have been reported by Wu & Fang (2003). In the present paper, we described a new species, *Gonoclostera fangi* sp. nov. Adults as well as the genitalia are illustrated.

Genus *Gonoclostera* Butler, 1877

Type-species: *Gonoclostera latipennis* Butler, 1877

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Gonoclostera Butler, 1877, Ann. Mag. Nat. Hist. (4)20: 475 (Type-species: *Gonoclostera latipennis* Butler, 1877 [= *Pygaera timoniorum* Bremer, 1861])

Plusiogramma Hampson, 1895, Trans. Ent. Soc. Lond.: 278 (Type-species: *Plusiogramma aurosigna* Hampson, 1895)

Adult: Costal margin of forewing straight; outer margin with hook at apex, M₂ vein extrude; inner margin finely excurvature; ground color dark brown, or brown, mixed black or blackish red; basal part color dark than outside; usually with argent mark at basal part and middle part of foreside, but some specimen without or absent argent mark. Hindwing thin brown color, basal part thin than outside part.

Male Genitalia: Uncus thick, larger than socci; socci small and cicatrized. Valva broad; apex part thick and sclerotized, form a flat and tongue shaped; sacculus with long hair, contract. Saccus small. Aedeagus slightly straight, caecum short.

Female Genitalia: Papillae analis broad; apophysis posterioris short; ductus bursae finely flat; corpus bursae round at anterioris part.

Checklist of the genus *Gonoclostera* of the World

G. timoniorum (Bremer, 1861) = *G. latipennis* Butler, 1877

G. denticulate (Oberthür, 1911)

G. aurosigna (Hampson, 1895)

G. argentata Oberthür, 1914

G. fangi sp. nov.

Key to the species of genus *Gonoclostera* from China based on the male genitalia characters

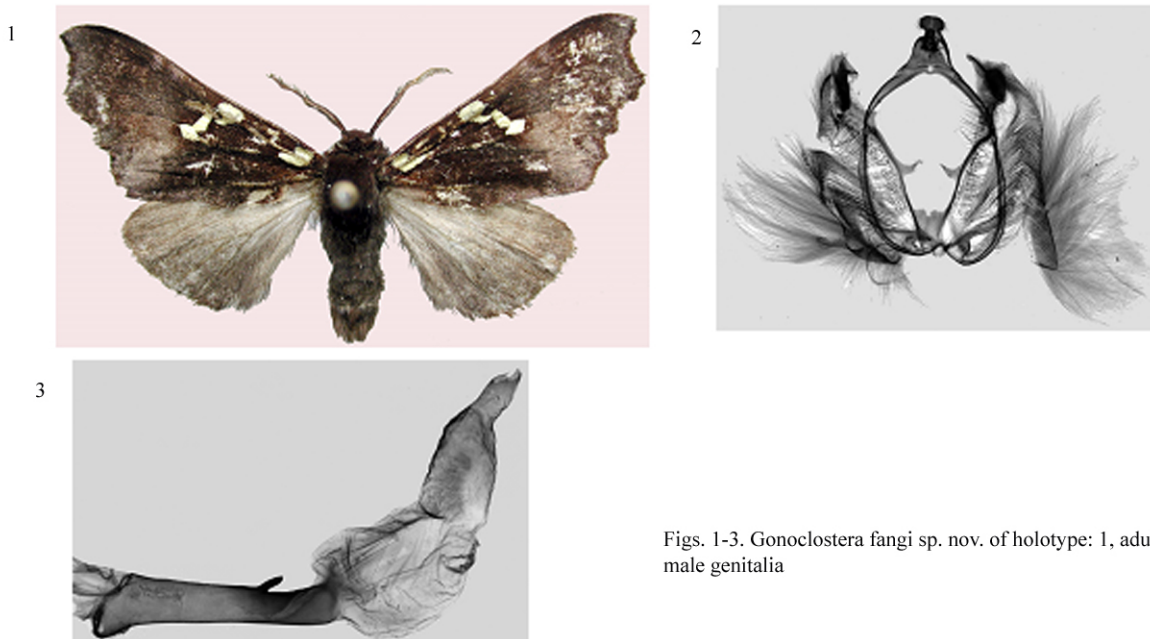
1. Aedeagus without spine-arm.....2
Aedeagus with spine-arm.....*fangi* sp. nov.
2. Uncus without sunken at top.....3
Uncus with sunken at top.....*denticulate* (Oberthür, 1911)
3. Apex part of valva thick and sclerotized.....*argentata* Oberthür, 1914
Apex part of valva round,
no thick and sclerotized.....*timoniorum* (Bremer, 1861)

***Gonoclostera fangi* sp. nov. (Figs. 1-3)**

Types. Holotype: male, Prov. Yunnan, Kongdang, 23 V 2007 (Coll. Yuanfeng), genitalia slid No. HHL-1490. Paratypes: 1 male, Prov. Yunnan, Kongdang, 23 V 2007 (Coll. Yuanfeng); 4 males, Pro. Yunnan, Lijiang, Wanlong, 10-13 VII 2009 (Coll. Han, Qi, Shao); 6 males, Prov. Yunnan, Lijiang, Yuhucun, 14 VII 2009 (Coll. Han, Qi, Shao); 1 male, Prov. Yunnan, Pur, Simao,

15-19 VII 2009 (Coll. Han, Qi, Shao).

Diagnosis. This species is very similar to *C. aurosigna*, but can be distinguished by the following characteristics: forewing rather singleness, dark brown; dark brown between basal part and postmedial line, mixed with black at costal; postmedial line gray, double, wave, weakly protruding at M_{2-3} ; sunterminal line gray, with large V shaped concave at M_1 ; pointed at apex; postmedial line distinct nearby inner margin.



Figs. 1-3. *Gonoclostera fangi* sp. nov. of holotype: 1, adult; 2-3, male genitalia

Description (Fig. 1). Wingspan 33–38 mm (holotype is 33 mm). Head darker blackish brown. Throat with blackish and long hairs; abdomen with brown. Forewing smog, darker blackish brown at median, antemedial and basal areas, brown postmedial, sunterminal and terminal areas, and finely light at postmedial area; a head of bean sprout shaped argent mark at basal part nearby costal margin; antemedial line smog, indistinct, a short argent band close to costal margin; median line indistinct; one argent mark between costal and cell, and two argent marks in cell; postmedian line wave, and sunken between Cu_1 and M_3 vein; subterminal line finely wave; outer margin sunken between apex and M_2 , and slight sunken between Cu_1 and Cu_2 vein; hook shaped at apex. Hindwing thin brown color, basal part thin than outside part, without especially characteristic.

Male genitalia (Figs. 2-3). Uncus short, thick, roundly at top; socci shorter and narrower than uncus, finger shaped. Tegumen slender, thick and broad at peak. Succus short, and narrow. Juxta tongue shaped, slightly sclerotized. Valva expanse at basal, narrow at top; reversed of valva membranous, with many long hair; costal process longer than valva, sclerotized, broad, tongue shaped; left valva with a broad bursa at basal part. Aedeagus cylinder and straight; zone finely sclerotized, with a strong and sclerotized spin; coecum penis short triangle. Vesica membra-

nous and large swollen; diverticulum small, slightly contractive; without cornuti.

Distribution. China (Yunnan: Nujiang canyon, Lijiang, Pur).

Etymology. The species name is dedicated to Boffin Cheng-Lai Fang, a famous Chinese lepidopterist.

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